

Management Accountant.

2. My official duties with the Commission include participating in fact-finding inquiries and investigations to determine whether the federal securities laws have been violated and assisting in the Commission's litigation of securities laws violations. This includes interviewing witnesses, reviewing and analyzing financial and other records of various entities and individuals, and tracing financial transactions to determine their source and use.

3. As part of my official duties, I was involved in a Commission investigation involving Mieka Energy Corporation ("Mieka"), Vadda Energy Corporation, Robert William Myers, Jr. and Stephen Romo (together, "Defendants") to determine whether the Defendants violated federal securities laws in connection with the offer and sale of multiple oil and gas offerings. In connection with this investigation, and pursuant to subpoenas and standard document requests, I, and other members of the Commission staff, reviewed various documents related to the Defendants, including but not limited to, offering materials, bank account records, public records, and records produced by the Defendants, witnesses, and other third-parties.

4. Moreover, I reviewed the written materials that described the offering and that were presented to investors. Those documents included: (1) Confidential Information Memoranda ("CIM") that purported to describe generally how the venture would operate; (2) brochures summarizing the offering and used to pitch prospective investors; (3) Joint Venture Agreement ("JVA") that designated Mieka as the managing joint venturer, with sole authority to bind the venture; (4) a subscription or application agreements that investors signed; and (5) investor questionnaires (together, the "Offering Documents"). True and correct copies of the offering documents for the 2010 Mieka PA/WestM/Marcellus Project II" (the "2010-JV") are attached hereto as **Exhibit A**.

Bank Record Analysis

5. As part of my official duties during the investigation, I reviewed and analyzed financial records and other documents in order to determine the sources and uses of funds in connection with the Defendants' efforts to raise money to fund the 2010-JV. The offerings, marketed and sold by the Defendants, purported to sell "units of interest in a joint venture." Mieka is a Delaware corporation that served as the managing venturer for the 2010-JV. As part of my analysis, I obtained and analyzed bank records for bank accounts maintained at Texas Capital Bank during the relevant period, which were affiliated with the Defendants and/or the 2010-JV. Attached as **Exhibit B** is a listing of bank accounts I reviewed and analyzed.

6. Based on my review and analysis of the bank records and a review of the written documents associated with the 2010-JV as well as the books and records of Mieka, I determined the Defendants raised approximately \$4,395,600 from over 60 investors.

7. Based on my review of the bank records, investors remitted checks or made wire transfers payable to the JV for the purchase of a JV unit(s) or fraction of a unit. Investors were located throughout the United States in at least 21 different states as determined by the addresses on investors' deposited checks or wires into the JV bank accounts.

8. A review of the bank account records determined that investor funds for the 2010-JV were deposited into one of two accounts at Texas Capital Bank that were related to the 2010-JV. Bank records show that these funds were the primary source of cash for the JV and that the JV transferred the proceeds of each offering to other Mieka accounts and commingled them with other funds. Mieka then used these funds to pay the expenses of other Mieka projects, or other expenses it may have occurred in other areas of its business. There was no way to determine which investor funds Mieka was using to pay any particular expense. In total,

I identified only \$850,875 that was spent in accordance with the JVA. The remainder of the funds was spent on other expenses, including on Mieka projects other than the 2010-JV. A chart summarizing my analysis of this flow of funds is attached to this declaration as **Exhibit C**.

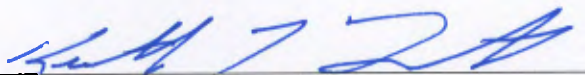
Sales Defendants

9. Based on my review of the bank records, I determined that Myers received compensation from Mieka totaling \$121,466 from September 2010 through October 2011 as commissions from the sales of interests in the 2010-JV.

10. Based on my review of the bank records, I determined that Romo received compensation from Mieka totaling \$69,962 from September 2010 through October 2011 as commissions from the sales of interests in the 2010-JV.

11. True and correct copies of charts that I prepared listing the commission payments made to Myers and Romo from September 2010 to October 2011 are attached as **Exhibit D** and **Exhibit E**.

Executed on September 2, 2016 in Fort Worth, Texas.



Keith J. Hunter

EXHIBIT

13

1



Energy & You

Special Edition 2010

The Marcellus Shale

op -por -tu -ni -ty

-noun, plural-ties

1 : a favorable juncture of circumstances

2 : a good chance for advancement or progress

3 : a good position, chance, or prospect, as for advancement or success

How does a person recognize when a favorable juncture of circumstances are present? How does a person evaluate when a good chance for advancement is real?

Using a quote from President Ronald Reagan, "TRUST & VERIFY" ! When President Reagan was negotiating with the old Soviet Union he said that he would trust the Russian Government, but, he also wanted to look into the silos to verify that the rockets they said were being dismantled were not there. He wanted, in other words, to look under the hood. That same philosophy can be employed when one needs to evaluate or *look under the hood of a company* to see what's there, thereby ensuring for themselves that a genuine "opportunity" for financial advancement is present.

To help serve that purpose, MIEKA has prepared these informational brochures to highlight exactly what is *under the hood* in our future! We hope you find this brochure informative and can sense our excitement. It will show that our leases are located in an area surrounded by fields being developed by major energy companies and include some results of their drilling efforts. You can read about our team of industry experts including their success stories. Our expert team of professionals will oversee all phases of MIEKA's field development, from supervision of the entire drilling process to the design of the cutting edge fracking techniques we intend to use once the wells are drilled. Also included is information about the patented drilling rig that we intend to use to drill our wells and the person who developed it. In our opinion, you will see one of the best planned, best manned, and most opportunistic ventures available today.

- *Exxon Mobile Corp. the world largest publicly traded company has 19,400 acres of lease in the Marcellus Shale. In Sept. '08 Exxon bid 85.2 million for 18 blocks in the marcellus, a large shale formation that runs thru New York, Pennsylvania, Ohio and West Virginia.*
- *Atlas Energy Resources, LLC announced today its third horizontal well had achieved an initial rate into pipeline of 10.1 Mmcfe per day*
- *The most recent Marcellus vertical wells drilled by Atlas Energy Resources are averaging over 2 million cubic feet of gas per day initial production*
- *Experts now believe the Marcellus formation may contain up to 1,300 trillion cubic feet of natural gas.*
- *Range Resources announces an average peak rate of 4.1 Mmcfe per day on horizontal wells drilled in the Marcellus Shale*

EXHIBIT A

MIEKA 000640

APP 00005



Mieka's Marcellus Shale Operations & Developmental Management Team

Terrell A. Dobkins



Terrell A. Dobkins, has over thirty years of experience as a successful energy industry executive and a track record of building profitable natural gas programs in tight gas formations. Mr. Dobkins trained as a petroleum engineer with Amoco Production Company and Amoco Research before moving on to American Hunter Exploration and Barrett Resources Corporation. During the first twenty years of his career, Mr. Dobkins trained and worked alongside some of the world's pioneers in developing the frac technology that has enabled development of the enormous gas reservoirs trapped in the "unconventional" rock formations. Some of the tight gas and shale gas projects he was involved with include the East Texas Cotton Valley, Colorado Piceance Basin, Wyoming's Wamsutter and Moxa Arch Fields, Oklahoma's Red Oak and Woodford formations, and Texas' Barnett Shale. After leaving Barrett Resources in 1998, Mr. Dobkins was the Vice President-Production at the start up, Pennaco Energy, where his team drilled and developed a 1,500 well coalbed methane gas program in the Powder River Basin comprising 400,000 acres. After two and one-half years and a \$70 million investment, Pennaco was sold to Marathon in 2001 for \$500 million. Subsequently, in August, 2002, Mr. Dobkins was a key executive in the start up of Antero Resources as Vice President-Production. Over the next two and one-half years, Antero invested \$170 million in building a 200 well operation in the Barnett Shale, selling the assets in April, 2005 to XTO for just under \$1 billion. Mr. Dobkins and Antero II continued to develop tight gas and shale gas reserves in the Piceance Basin and the Arkoma Woodford Shale. In August, 2007, Mr. Dobkins was a principal founder of Rimrock Energy, LLC, who raised \$250 million from Bear Stearns Merchant Bank and Natural Gas Partners for the development of an aggressive drilling program in the Barnett Shale. Mr. Dobkins left Rimrock Energy in January, 2009 to pursue this opportunity in the Marcellus

Thomas G. Harris

Thomas G. Harris, Founder and President of Black Rock Exploration and Production, provides extensive experience in energy industry leadership, corporate finance, exploration and development. At Black Rock, Mr. Harris focused on identifying oil and gas resource plays in North America with the intent to develop and operate the reserves in those properties. From 2005 to 2008, as Founder, CEO and President of Kerogen Resources, LLC, Mr. Harris was the architect of more than six joint venture oil and gas projects, utilizing investment capital which he raised. Mr. Harris specializes in the identification and extraction of unconventional gas shale resources. Using cutting edge technology, he has painstakingly worked to identify and acquire proven and unproven shale gas opportunities within select North American basins. Having 30 years of experience with major, independent production companies, Mr. Harris has proven an ability to attract and direct exploration and development professionals who are among the elite in the industry.



Nick Steinsberger



Nick Steinsberger began his career with Mitchell Energy & Development in 1987 where he was responsible for a 250 well program in the Barnett Shale. Mr. Steinsberger was responsible for the first water fracs in the Barnett Shale in 1997, as well as the first refrac of a Barnett Shale well. As the Barnett Shale play grew, Mr. Steinsberger continued to improve upon completion designs while overseeing the operations of the business, which involved deployment of 18 drilling rigs in 2001. After the sale of Mitchell Energy to Devon Energy in January 2002, Mr. Steinsberger continued as Completion Manager for the Barnett Shale and was responsible for development of the first 30 horizontal wells. In July, 2003, Mr. Steinsberger became Vice-President - Engineering for Republic Energy, responsible for drilling and completing approximately 30 wells in the Barnett Shale in a one year period before selling their assets to Burlington. Republic's program comprised some of the first successful wells in what is now known as the Tier 2 Barnett Shale play. After the sale, Mr. Steinsberger started a consulting business. Mr. Steinsberger has drilled and completed every horizontal well in the Barnett Shale in which the Four Sevens Oil Company, Moncrief Oil and Republic Energy have been involved. The average estimated ultimate reserves (EUR) of Four Sevens' Barnett wells, which were sold to Chesapeake Energy in 2006, were higher than any other wells reported at that time. Mr. Steinsberger has also drilled and completed shale wells in the Woodford, Fayetteville, Floyd, Marcellus and several shale properties in Canada.

Latest Marcellus Shale News!

Atlas Energy Figures Out a Way to Increase Marcellus Shale Gas Production an Average 138% Per Well

Atlas Energy's Marcellus Shale gas output is up 21% in the second quarter from the first quarter of 2010. At the end of June, their net production rate in the Marcellus region was 59 Mmcfe (million cubic feet of natural gas equivalents) per day. The company brought eight new horizontal Marcellus Shale wells online in southwestern Pennsylvania from April to June with average peak average daily rates of 5.1 Mmcfe per day.

According to Atlas, the lateral portion of the new wells was "landed low" (placed near the bottom) in the Marcellus Shale layer, and that strategy is helping them get more gas from their wells. As the following table from Atlas shows, wells with lateral placements landed low produce more gas than those landed high—an average of 138% more according to Atlas (reference the 30 Day Avg column).

The Reason Big Oil is Getting Gassy

An *Economist* article republished in the *Winnipeg Free Press* does a good job of explaining why natural gas is on the ascendency in the energy universe, and why oil will soon be in decline. Need evidence? Last year, seven of eight Exxon Mobil projects that were completed were natural gas projects. This year two of three scheduled projects are natural gas related. Royal Dutch Shell says by 2012 half (50 percent!) of its energy output will come from natural gas.

Wall Street Journal Predicts Shale Gas Will Rock the World

Today's *Wall Street Journal* includes a special section on energy, and the lead story, taking up the entire front page and continuing inside, is titled, "How Shale Gas is Going to Rock the World." The article is written by Amy Myers Jaffe, a Fellow in Energy Studies at Rice University. Ms. Jaffe writes a stellar article that shows how shale gas, if not derailed by environmental extremists, will be THE energy story of the next several decades. MDN highly recommends you read this article (generally requires a subscription, but this special supplement is free and open for now—read it while you can).

East Resources Sells to Royal Dutch Shell for \$4.7 Billion, Deal Includes All of East's Marcellus Shale Operations

Major Transaction: CONSOL Energy Buys Dominion Resources Appalachian Business, Including Marcellus Gas Operations, for \$3.475 Billion

The fantastic **MARCELLUS SHALE**

In the United States history of energy development there have been some incredible discoveries. The first discovery of oil occurred in Titusville PA when Mr. Edwin Drake in 1859 drove pipe 70 feet below the surface and became the first person to ever successfully drill for oil. And with that single well the Pennsylvania oil rush was born, as speculators from all over the country gobbled up Pennsylvania land in the name of crude.

Now some 149 years later, it's happening again with the renewed interest in the Marcellus Shale Formation, an area that runs through Pennsylvania, Ohio, West Virginia and New York. But it's not oil this time that has gotten everyone so excited. It is NATURAL GAS!

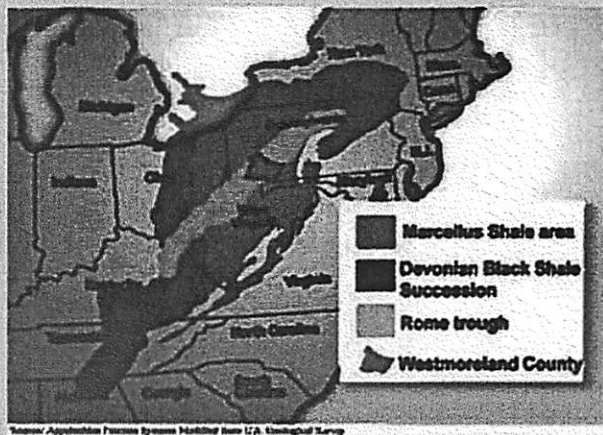
Many experts now believe the Marcellus Shale Formation may contain up to 1300 TRILLION CUBIC FEET OF NATURAL GAS.

Companies who are active in the Marcellus Shale make up an impressive list:

Atlas Energy, XTO, EOG, Range Resources, Ultra Petroleum, Chesapeake, Cabot, Exxon Mobil, and now Mieka Corporation.

Summation of the Marcellus Shale Opportunity:

- Drilling programs surrounded by the majors
- Current low price of natural gas lowers drilling cost
- Marcellus track record for other companies drilling there now - 97% success rate
- Longevity of Marcellus wells projected at 25 to 30+ years
- Monthly income potential
- Partnership with major industry leaders
- Tax Benefits: a potential 70% to 75% tax deduction



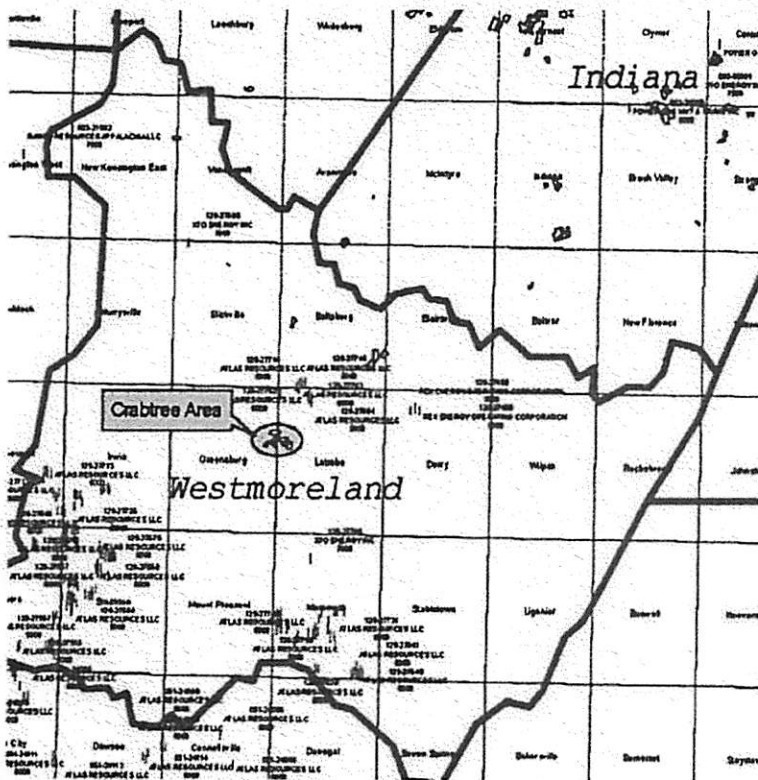
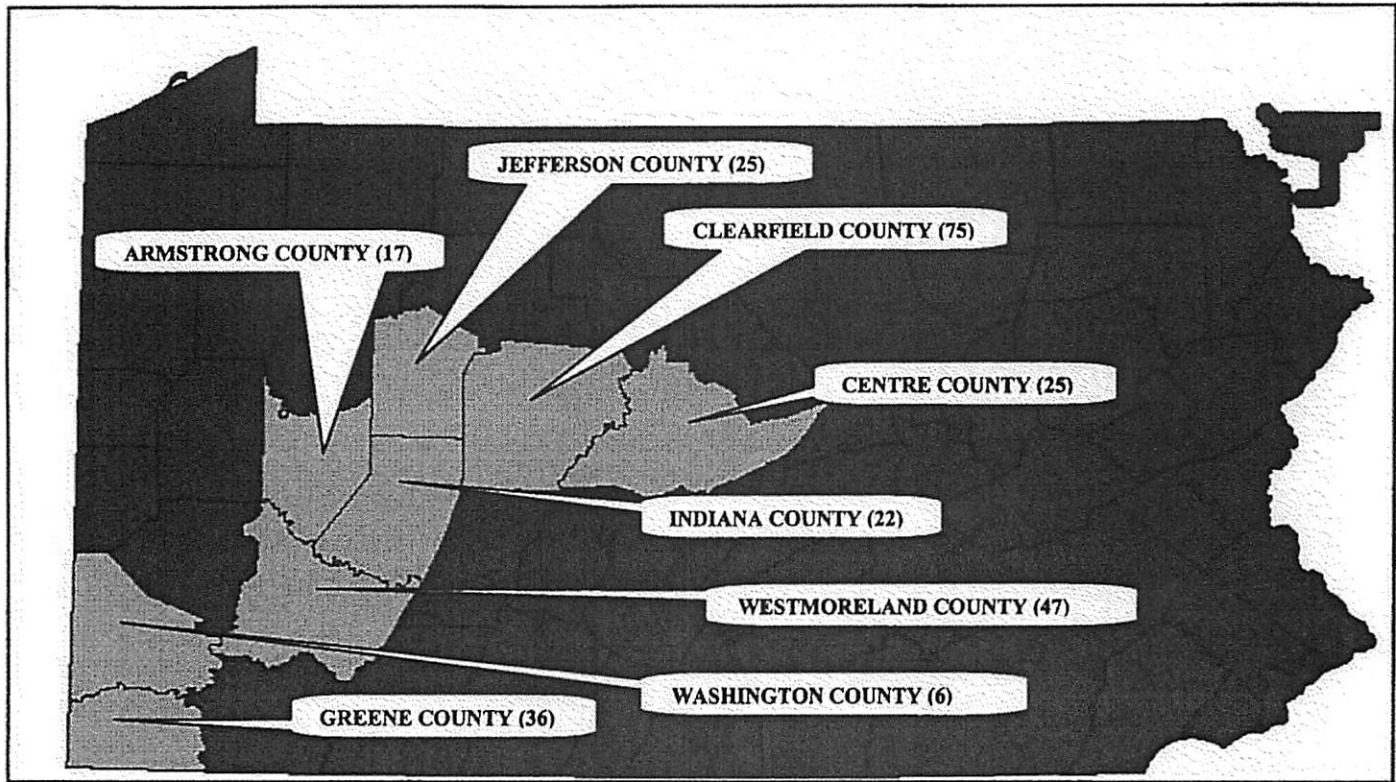
Mieka Energy has assembled an expert management team of top industry professionals to supervise the drilling, fracing, completing and production of the company's Marcellus shale leases. The technology and drilling techniques that will be employed is on the cutting edge of the industry and will be used by the experts who developed and perfected them. Mieka's leases are located in the very heart of the Marcellus fairway. Since 1859, our country has seen a number of opportunities in energy developement and many experts agree that the Marcellus Shale Formation could be the most historic and lucrative in United States history.

MIEKA 000643

APP 00008

Mieka Corporation

2



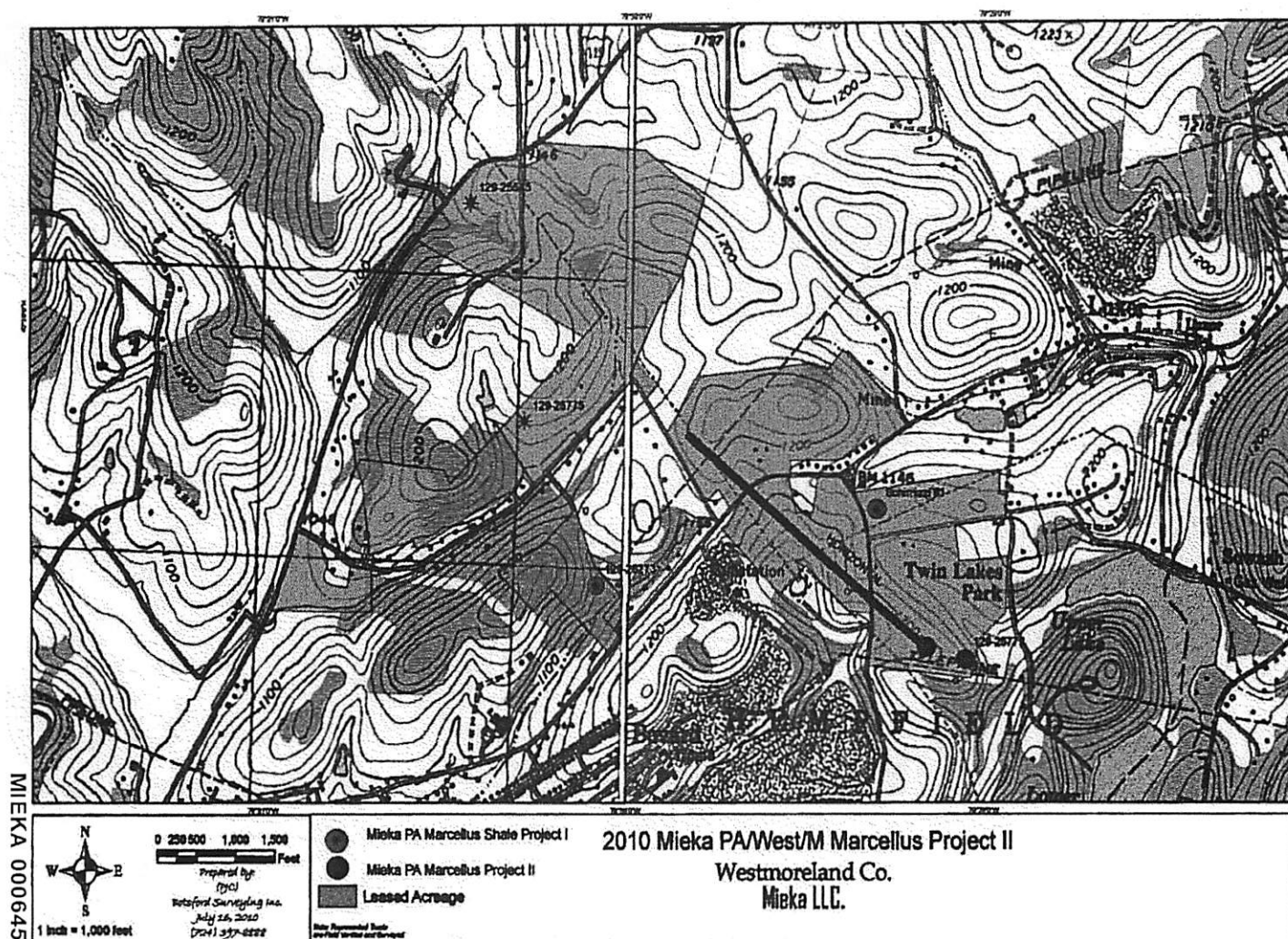
Mieka Energy strategy is simple. Drill in proven areas: Surround yourself with successful industry professionals. The reason we develop areas where the majors are active is two fold. First, because the, majors are there! Second, we can glean their latest technologies and therefore duplicate their success. The top map illustrated wells drilled to date in the various counties. The bottom map illustrates Mieka's current acreage positions and the major companies surrounding Mieka's acreage

For more information contact
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MIEKA 000644

APP 00009

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Map of Mieka acreage currently being developed in PA's Marcellus Shale plus two potential drilling locations.



From the Managing Director;

The first picture on the top half of this page is a map of the Marcellus Shale lease acreage that Micka is now developing in Pennsylvania. Under the map, the first picture depicted is of an actual frac job being done on a horizontal well in Pennsylvania. The bottom picture is a diagram of the steps taken to drill a horizontal well.

Exxon Mobil, Atlas Energy, ETO, Range Resources, Ultra Petroleum, Chesapeake, and Micka Energy are a few of the companies active in the Marcellus Shale in Pennsylvania. With an estimated 1300 TRILLION CUBIC FEET of gas, it is no wonder. Micka is positioned right smack dab in the middle of this economic feast. We have plans to completely develop the acreage above. We have an additional 700 acres in Elk County and are in daily negotiations to increase our acreage position. What you see, plain and simple, is opportunity!

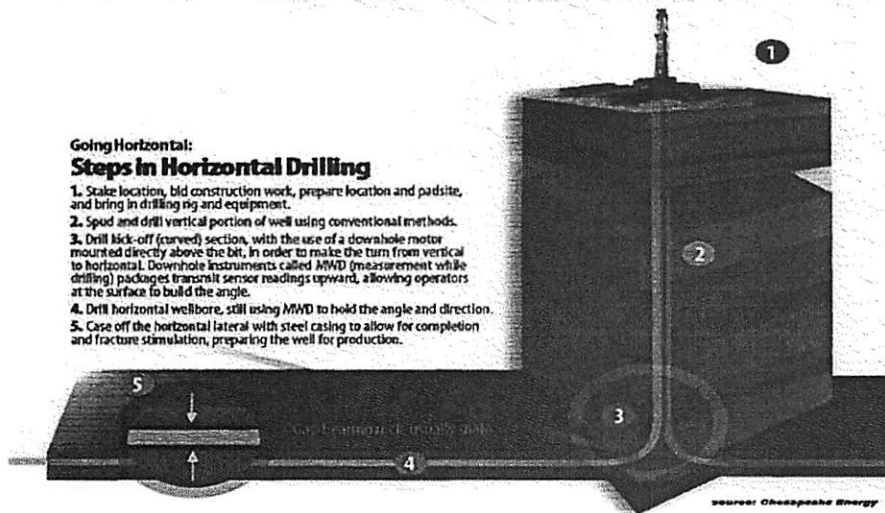
There have been in our country's history several "Gold Rushes". There was the 49 Gold Rush, the discovery of oil that transformed our country and brought about the Industrial Revolution, and now, there is the Marcellus Shale, which has been referred to as the "New American Gold Rush" on Fox business. As political trends shape our future and the rush for alternative energy coupled with our country's need for energy independence grows, the obvious answer to these problems can only be found in natural gas. That is why so many experts agree that natural gas is Americas' future. I believe the opportunity to partner with Micka today is a ground floor opportunity for the future.

I asked Bob Myers, one of our senior vice presidents, what he saw as a common thread in the Marcellus Shale. He answered opportunity, then business, and concluded by saying people are going to make a lot of money. I told him all of those were correct, however, since all of the majors have stopped working with individual investors, the common thread is really Micka, because today, the opportunity for an individual to participate directly in the Marcellus Shale is *Micka Energy!*

Going Horizontal:

Steps in Horizontal Drilling

1. Stake location, bid construction work, prepare location and pad site, and bring in drilling rig and equipment.
2. Spud and drill vertical portion of well using conventional methods.
3. Drill kick-off (curved) section, with the use of a downhole motor mounted directly above the bit, in order to make the turn from vertical to horizontal. Downhole instruments called MWD (measurement while drilling) packages transmit sensor readings upward, allowing operators at the surface to build the angle.
4. Drill horizontal wellbore, still using MWD to hold the angle and direction.
5. Case off the horizontal lateral with steel casing to allow for completion and fracture stimulation, preparing the well for production.



MIEKA 000646

Potential Production Returns

2010 Miekra PA/WestM/Marcellus Project II

The following is an example of potential production returns based on an investment of \$158,400 (the "Investment Amount") for one unit at the beginning of the 2010 Miekra PA/WestM/Marcellus Project II (the "Joint Venture") and is based on the assumption below. One unit is expected to be entitled to approximately 1.44045% net revenue interest in the Project Wells.

The following potential returns are not guaranteed. The actual amount of gas produced and the price that may be received for the gas may vary in a material manner over the expected production period of the Joint Venture. See the Confidential Information Memorandum, including the risk factors described therein, for a complete description of the Joint Venture.

		PRICE PER MCF													
RATE = MCF (Cum. of all wells)		\$	4	\$	5	\$	6	\$	7	\$	8	\$	9	\$	10
1,000	MI	\$	1,813.30	\$	2,016.83	\$	2,418.88	\$	2,823.28	\$	3,228.81	\$	3,629.83	\$	4,033.28
	YR	\$	18,359.85	\$	24,188.50	\$	29,038.47	\$	33,879.38	\$	38,719.30	\$	43,659.21	\$	48,599.12
	ARR		12.22%		15.28%		18.33%		21.38%		24.44%		27.50%		30.56%
	TER		18.19%		20.24%		24.28%		28.33%		32.38%		36.42%		40.47%
1,500	MI	\$	2,418.88	\$	3,024.95	\$	3,629.83	\$	4,234.82	\$	4,839.81	\$	5,444.80	\$	6,049.80
	YR	\$	29,038.47	\$	38,288.34	\$	43,558.21	\$	50,819.88	\$	58,079.94	\$	65,338.81	\$	72,600.88
	ARR		18.33%		22.82%		27.50%		32.08%		36.67%		41.25%		45.83%
	TER		24.28%		30.35%		36.42%		42.49%		48.56%		54.63%		60.71%
2,000	MI	\$	3,228.81	\$	4,033.28	\$	4,839.81	\$	5,646.56	\$	6,453.22	\$	7,259.87	\$	8,066.52
	YR	\$	38,719.30	\$	48,599.12	\$	58,078.94	\$	67,758.77	\$	77,438.59	\$	87,118.42	\$	96,798.24
	ARR		24.44%		30.56%		36.67%		42.78%		48.89%		55.00%		61.11%
	TER		32.38%		40.47%		48.56%		56.65%		64.75%		72.85%		80.94%
3,000	MI	\$	4,839.81	\$	6,049.80	\$	7,259.87	\$	8,469.85	\$	9,679.82	\$	10,889.80	\$	12,099.78
	YR	\$	58,078.94	\$	72,598.88	\$	87,118.42	\$	101,638.15	\$	116,157.88	\$	130,677.62	\$	145,197.36
	ARR		36.67%		45.83%		55.00%		64.17%		73.33%		82.50%		91.67%
	TER		48.56%		60.71%		72.85%		84.99%		97.13%		109.27%		121.41%
4,000	MI	\$	6,453.22	\$	8,066.52	\$	9,679.82	\$	11,293.13	\$	12,906.43	\$	14,519.74	\$	16,133.04
	YR	\$	77,438.59	\$	96,798.24	\$	116,157.88	\$	135,517.54	\$	154,877.18	\$	174,236.83	\$	193,596.48
	ARR		48.89%		61.11%		73.33%		85.55%		97.78%		110.00%		122.22%
	TER		64.75%		80.94%		97.13%		113.32%		129.50%		145.69%		161.88%
5,000	MI	\$	8,066.52	\$	10,083.15	\$	12,099.78	\$	14,116.41	\$	16,133.04	\$	18,149.67	\$	20,166.30
	YR	\$	96,798.24	\$	120,987.90	\$	145,187.30	\$	169,386.92	\$	193,586.48	\$	217,786.04	\$	241,985.60
	ARR		61.11%		76.39%		91.67%		106.94%		122.22%		137.50%		152.78%
	TER		80.94%		101.18%		121.41%		141.65%		161.88%		182.12%		202.35%
6,000	MI	\$	9,679.82	\$	12,099.78	\$	14,519.74	\$	16,939.69	\$	19,359.65	\$	21,779.60	\$	24,199.56
	YR	\$	116,157.88	\$	145,187.30	\$	174,236.83	\$	203,276.30	\$	232,315.78	\$	261,355.25	\$	290,394.72
	ARR		73.33%		91.67%		110.00%		128.33%		146.66%		165.00%		183.33%
	TER		97.13%		121.41%		145.69%		169.97%		194.26%		218.54%		242.82%
7,000	MI	\$	11,293.13	\$	14,116.41	\$	16,939.69	\$	19,762.97	\$	22,586.26	\$	25,409.54	\$	28,232.82
	YR	\$	135,517.54	\$	168,388.92	\$	203,276.30	\$	237,163.69	\$	271,035.07	\$	304,914.46	\$	338,793.84
	ARR		85.55%		106.94%		128.33%		149.72%		171.11%		192.50%		213.89%
	TER		113.32%		141.65%		169.97%		198.30%		226.63%		254.96%		283.29%
8,000	MI	\$	12,906.43	\$	16,133.04	\$	19,359.65	\$	22,586.26	\$	25,812.86	\$	29,039.47	\$	32,266.08
	YR	\$	154,877.18	\$	193,596.48	\$	232,315.78	\$	271,035.07	\$	309,754.37	\$	348,473.68	\$	387,192.96
	ARR		97.78%		122.22%		146.66%		171.11%		195.55%		220.00%		244.44%
	TER		129.50%		161.88%		194.26%		226.63%		259.01%		291.39%		323.76%

Assumptions

- The tax effected rates of return shown above assume that the Venture's tax deduction for Intangible Drilling costs equals 70% of his investment (\$158,400) and that all of this tax benefit may be utilized at a 35% marginal federal tax rate. This would result in a first year saving to the Venture of \$38,808 (24.5% of the initial Investment Amount), resulting in a "tax-effected investment amount" of \$119,592.
- In the above projections, the following acronyms have the following meanings and are calculated as follows:

$$MI \text{ (Monthly Income)} = (MCF/Day \times \text{Price per MCF}) \times 28 \text{ days per month} \times 0.0144045$$

$$YR \text{ (Yearly Income)} = MI \times 12$$

$$ARR \text{ (Annual Rate of Return)} = YR / \$158,400 \text{ Investment Amount}$$

$$TER \text{ (Tax Effected Return)} = YR / \$119,592 \text{ tax effected Investment Amount}$$
- The first 100% of cash distributions made to Ventures represents a Return of Capital.

MIEKA 000647

APP 00012

UNCONVENTIONAL GAS

MARCELLUS SHALE

The Marcellus shale marks a new epoch in the distinguished history of Appalachian Basin natural gas production.

ARTICLE BY
PEGGY WILLIAMS

PHOTOGRAPHY BY
MIKE ROBINSON

The Marcellus shale's enormous extent coincides with a dense web of infrastructure and proximity to the world's best gas markets. Facing page, the size of the frac stack on EQT Corp.'s 1590218 J.E. Mitchell Marcellus well, in Morgan Township, Greene County, Pennsylvania, attests to the size and complexity of Marcellus completions.

In autumn of 1753, George Washington was camping at a spring in the Allegheny Mountains on his first trip to Fort Le Boeuf in the Ohio country. Washington, then a major in the British army and adjutant general to Governor Dinwiddie of Virginia, had been dispatched to confront the commander of the French fort. The offending structure had been built to advance claims by France over disputed lands along the Ohio and Allegheny rivers. An ember from Washington's campfire dropped into the bubbling water, and the spring burst into flames. It was one of the first times natural gas was noted in the region that would one day yield the great Appalachian Basin gas fields.

A century and a quarter later, the phenomenal Haymaker well blew in at Murrysburg Field in Westmoreland County, east of Pittsburgh, Pennsylvania, at the rate of 34 million cubic feet per day. The wildcat catapulted natural gas into the region's consciousness, and marked the birth of a thriving business that would deliver fuel to Pittsburgh's mighty iron and steel mills, glass kilns, and the homes, schools and churches of its residents.

Now, another 130 years have passed, and another great well has been brought in. Range Resources Corp., after four years of efforts, gauged a horizontal Marcellus well in Washington County, Pennsylvania, at a peak 24-hour

rate to sales of 26 million cubic feet equivalent per day. The landmark well averaged 10.8 million per day for 30 days, and it heralded the dawn of another great age of Appalachian natural gas.

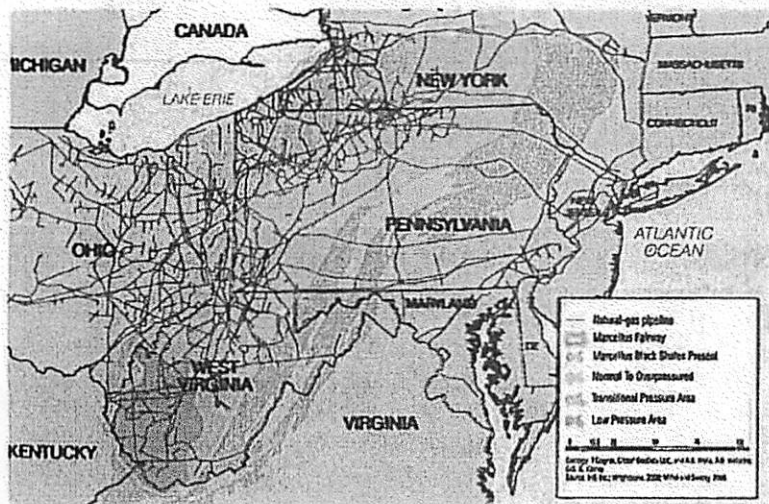
Many-faceted shale

The Middle Devonian Marcellus shale reservoir responsible for the excitement today takes its name from a surface exposure in west-central New York State, near the small village of Marcellus on the west side of Syracuse in Onondaga County. The organic-rich shale underlies more than two-thirds of Pennsylvania, portions of New York, most of West Virginia, and runs into eastern Ohio. It even edges into the fringes of Maryland, Virginia and Tennessee. Within the confines of the basin, the Marcellus can be found at depths down to 9,000 feet, and can attain thickness in excess of 250 feet.

Across its impressive extent, the black shale has many faces. Part of the Marcellus play is overpressured, some areas are normal, and others exhibit very low pressures. Certain areas produce dry gas while others make rich, wet gas.

Drilling results are beginning to reveal some broad divisions within the play, and two main areas of activity have coalesced. In the southwest side of the fairway, where Range hit its huge horizontal producer, industry has already delineated a giant gas field. More than 200 wells show the Marcellus is productive across an ample swath of counties in southern Pennsylvania and northern West Virginia. Depths to the shale run from 5,500 to 8,500 feet in this region, and its western parts feature wet gas that requires processing. This area of the Marcellus play is coincident with thousands of wells, both shallower and deeper than the shale, drilled for traditional Appalachian targets. Low-pressure gathering infrastructure laces through the undulating hills.

Some 150 miles away, in northeast Pennsylvania and southern New York, another prime Marcellus area has emerged. This region yields dry gas from overpressured Marcellus occurring at vertical depths between 4,500 and 9,000 feet. Terrain, water resources and infrastructure

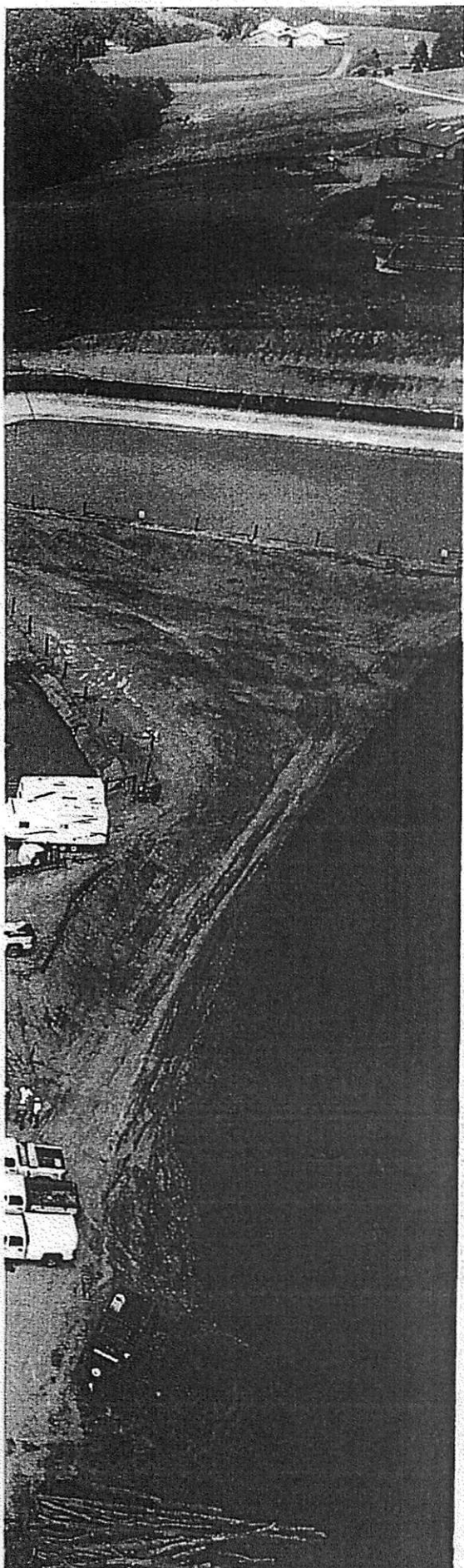






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issues pose unique challenges in this part of the play, which largely lacks prior gas-industry development.

Concept to fruition

Appalachia was a quiet, faded corner of the Oil Patch in the early 2000s. But, across the country in North Texas, rapidly evolving completion techniques were beginning to yield surprising wells from the Mississippian Barnett shale.

Fort Worth independent Range Resources, based in the heart of the Barnett shale, was familiar with those novel completions. It also had deep roots in Appalachia, from predecessor company Lomak Petroleum.

"Once the Barnett worked, everyone was looking for the next big shale," says Jeff Ventura, president and chief operating officer.

In early 2004, company geologist Bill Zagorski looked at a deal that featured a shale play in Alabama. Zagorski, based in Ohio at Range's Great Lakes subsidiary, had devoted his entire career to Appalachia. The Alabama shale deal didn't interest him, but he started to think about the Appalachian Marcellus shale and the parameters of thickness, porosity, thermal maturity and depth.

Zagorski put together a concept for Range management: he wanted the company to explore for Marcellus gas. "Bill thought characteristics of the Marcellus compared favorably to the Barnett," says Ventura. The Marcellus had a long history of minor production, and from the industry's earliest days drillers knew the shale was prone to significant shows. Still, commercial volumes had not been achieved.

The idea had huge upside, however. The Marcellus covered a vast area, had excellent gas in place and was close to premium markets. Range also had a plentitude of acreage in the basin, and an available wellbore it could use for a shale test.

Later in 2004, the company plugged back the Renz Unit #1, a vertical well in Washington County, Pennsylvania, and pumped the first Barnett-style slick-water frac job east of the Mississippi. It was a success. The Renz Unit #1, the first commercial Marcellus well in the new-era play, was put on line in 2005.

Range followed that initial test with a series of vertical wells. In 2006, it drilled the first horizontal Marcellus well in Pennsylvania. Its three inaugural horizontal attempts were disappointments, but the fourth was a bonanza. The Guila #9, also in Washington County, came on line in August 2007 for 3.4 million cubic feet a day. It has produced for two years, and its decline curves compare favorably to Barnett wells.

"Our vertical wells were economic, but what really mattered was the ability to ramp up rates significantly with horizontal wells," says Ventura. "Horizontal wells also improved the eco-



Jeff Ventura,
Range Resources
Corp. president
and chief
operating officer,
accepted Oil and
Gas Investor's
2008 Best
Discovery award
for Range's
leadership in the
54,000-square-
mile Marcellus
play. Facing
page, the eight-
stage frac job on
EQT's #590218
took two days;
each stage
required six
hours to
complete.

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